

REMARKS

Applicant wishes to thank the Examiner again for the benefit of the interview on September 20, 2005, and for the thorough examination. However, applicant is confused that the Office Action of December 2, 2005 was made final. The previous grounds for rejection based in part on Rogerson U.S. Patent No. 5,942,731 and other references have been withdrawn. New grounds for rejection are presented by the Office Action to which applicant has not had the opportunity to respond. Applicant believed at the end of the Interview on September 20, 2005, that with the submission of the Amendment of September 27, 2005 that the presented claims, as amended, would be allowed, and that if the Examiner had any further questions that applicant attorney would be telephoned.

Since allowance of the claims appears right in view of the new grounds for rejection, applicant have submitted this Response, together with a RCE, so the Examiner has the ability to schedule an Interview and resolve whatever matters are outstanding. Claims 28, 30-31, 35-56, 38-50, 53, and 55-59 are rejected under 35 USC § 103(a) as being unpatentable over Trost et al. U.S. Pat. No. 6,142,434 in view of Japanese Patent No. 11-210271 to Sagawa et al.. The Office Action concedes that Trost et al. '434 "fails to teach the cross-arm and extension arm are formed of metallic or coated with insulator coating." Office Action at 2. Enclosed is a machine translation of Sagawa JP '271 to further evidence the non-obviousness of the presently claimed invention.

Trost et al '434 discloses a multi-purpose utility pole clamp. The clamp is designed to eliminate through-bolt fastening mechanisms which are cumbersome and time-consuming to implement and present a serious hazard. As Trost et al explains:

"[T]he bolts extend through the center of the utility pole when installed. The metallic nature of the bolts creates a line of conductivity through the utility pole such that, in the case of a lightning strike, the resulting electrical charge is concentrated in the center of the pole. As will be appreciated by those skilled in the art, directing a lightning strike into the center of the utility pole creates an increased likelihood of having the utility pole burst, split, or become otherwise structurally damaged. This jeopardizes not only the structural integrity of the utility pole, but also the structural integrity of the various fixtures as attached to the poles. In either event, an increased risk arises of having downed utility poles and/or wires which consequently raises concerns of safety and high repair and/or replacement costs."

Trost et al 434, col. 2, ll 19-32.

Trost et al does disclose a cross arm 22, but there is no disclosure or suggestion of making the cross arm out of anything other than wood as traditional done. Indeed, given the purpose of the Trost multi-purpose utility pole clamp in eliminating bolt fasteners through the utility pole to reduce risk and damage from lightning strikes, it is equally contrary to the Trost et al 434 teachings to make the cross arm of metal. As explained at the Interview on September 20, 2005, a related fundamental problem focused on the cross arm that has plagued the art of medium voltage electricity distribution is the electrocution of birds on the cross-arms of utility poles. As noted in the references cited previously submitted by applicant, utility companies have been criminally prosecuted for electrocution of raptors by power lines. *See, Raptor Electrocutions and Distribution Pole Types*, at p. 3.

As a result, a host of different configurations for utility pole cross arms have been devised and are now mandated as part of permitting and licensing requirements by federal and state agencies in the United States. *See, Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996*. These designs have included ground steel bayonets (e.g., Figure 24 at 60), grounded steel cross arms with exposed jumper wires (e.g., Figure 25 at 61), non-conducting extension links (e.g., Figure 26 at 62), anti-perch guards to discourage perching (e.g., Figures 29 and 30 at 66-67), elevated perches with perch guards (e.g., Figure 23 at 59), insulated wire covers (e.g., Figure 21 at 56), side mounting eliminating the cross-arm (e.g., Figure 31 at 69), providing an insulated pole top or upper perch bar with insulated or covered jumper wires (e.g., Figures 30, 31 and 35 at 67, 69 and 74), raptor-safe compact and suspending designs (e.g., Figures 33 and 34 at 72 and 73), and suspended phase conductors allowing safe perching on pole top and cross-arms (e.g., Figure 37 at 76).

Sagawa et al JP '271, cited in combination with Trost et al '434 neither teaches or suggests **anything** of relevance either to Trost et al or the presently claimed subject matter. The rejection states that "[i]t would be obvious for one of ordinary skill in the art at the time the invention was made to have modified Trost et al's cross arm with a metallic and coated with plastic insulating material as **taught** by Sagawa et al to increase the life cycle for the cross arm than wood material and to reduce electrical shock on the cross arm." Office Action at 3. However, Sagawa et al taught **nothing** relevant to utility poles or cross arms for utility poles. As shown by the translation submitted herewith, Sagawa et al JP '271 discloses an

attachment structure “used for various kinds of guard fences.” Translation at [0001]. “The pipe-like post 10 and beam pipe 20 are formed of plastic coated metal pipes having imitation-wooden patterns” Translation at Abstract. The invention is to eliminate caulking to hold the beam pipe in the post by providing a “wedge-shaped pipe anchor which has and escapes from the side-face configuration which may take up most clearances, and has a stop projection is [sic] driven in the clearance.” Translation at [0008]. The invention solves the problem because as result “a beam pipe [can be inserted] in the mounting hole of a tubular stanchion easily without a cheek clearance with an easy means, and it is offering the attachment structure of a pipe beam where shakiness and rotation of a beam pipe can be suppressed completely.” Translation at [0007].

Sagawa et al JP ‘271 neither teaches or suggests anything relevant to utility poles, let alone address the problem solved by the presently claimed invention. **Nowhere** is the elegant solution to the problem provided by the presently claimed invention disclosed or suggested.

To the contrary, this evidence from Trost et al, Sagawa et al and the other cited reference is overwhelming as to the nature of the problems, and the extent to which the art has gone to try to solve the problems. As instructed by the Manual of Patent Examining Procedure: “The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure. *In re Vick*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).” MPEP § 2143 at 2100-125. Accordingly, these reference are strong and persuasive evidence that the claimed subject matter of claims 28, 30-31, 35-56, 38-50, 53, and 55-59 is **non-obvious** in view of the prior art.

More importantly, neither Trost et al ‘434 nor Sagawa et al JP ‘271 provides **any solution** for the problem of electrocution of birds in medium power transmission addressed by the present invention. It is fundamental that “[t]o establish a *prima facie* case of obviousness, ... [f]irst, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.” MPEP § 2143 at 2100-124-125. As the Manual of Patent Examining Procedure explains:

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of

ordinary skill in the art.' *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999)."

MPEP § 2143.01 at 2100-125. Here, as explained above, there is absolutely no motivation or suggestion in the nature of the problem solved, the teachings of the prior art, or the knowledge of the persons of ordinary skill in the art.

The present invention involves a simple concept, but that does not mean that the evidence required to establish *prima facie* obviousness is reduced. In *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000), the Federal Circuit reversed an obviousness rejection involving a technologically simple concept because there was no finding as to the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed invention). *Accord*, MPEP § 2143.01 at 2100-126; *see also*, *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide the suggestion to combine references.)

Moreover, if the teachings of those skilled in the art are considered, as they must, it is certain that the presently claimed subject matter was **not** obvious to those skilled in the art. Here again, the Manual of Patent Examining Procedure is instructive:

"If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) (Claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were located at the bottom end of the filter assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. The Board concluded the claims were *prima facie* obvious, reasoning that it would have been obvious to turn the

reference device upside down. The court reversed, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would allow out of the outlet instead of the purified gasoline, and the screen would become clogged.).”

MPEP §2143.01 at 2100-126.

In sum,

Finally, the attention of the Examiner is respectfully directed to the following instruction of the Manual of Patent Examining Procedure:

“To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical “person of ordinary skill in the art” when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention ‘as a whole’ would have been obvious at that time to that person. Knowledge of applicant’s disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the ‘differences,’ conduct the search and evaluate the ‘subject matter as a whole’ of the invention. The tendency to resort to ‘hindsight’ based upon applicant’s disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.”

MPEP § 2142 at 2100-123 [emphasis added].

For the foregoing reasons, Claims 28, 30-31, 35-56, 38-50, 53, and 55-59 should be allowed.

Claims 29 and 37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Trost et al and in view of Sagawa et al and further in view of US Patent No. 3,803,570 to Barlow et al. However, Barlow ‘570 patent adds nothing to address the deficiencies of Trost et al and Sagawa et al explained above. Barlow ‘570 is directed to a soil moisture field measuring apparatus, and neither discloses or suggests anything relevant to utility poles or utility pole cross arms, much solve the problem addressed by the presently claimed invention. The fact that tip 32 in Barlow ‘570 is electrically insulated by a dielectric plug 40 has not relevance to the presently claimed subject matter of claims 29 and 37.

Claim 30 is rejected under 35 U.S.C. §103(a) as being unpatentable over Trost et al and in view of Sagawa et al and in further view of United Kingdom Patent Application

2,384,223 to Lawson. However, the Lawson '223 patent adds nothing to address the deficiencies of Trost et al and Sagawa et al in relation to the presently claimed invention. Lawson '223 discloses a design of a trackway in a personal rapid transport system dedicated to move individual vehicles that travel between stations. Cross members 2 that are referred in the rejection are like railway ties that extend transversely between side beams 4,6 and support first and second track members 10,12 of the trackway. This teaching has no relation to utility poles and the cross arms thereof as claimed in claim 30.

Claims 32 and 52 are rejected 35 U.S.C. §103(a) as being unpatentable over Trost et al and in view of Sagawa et al and in further view of US Patent Application No. 2004/003502 to White. However, White '502 adds nothing to address the deficiencies of Trost et al and Sagawa et al as explained above. White '502 discloses an adjustable aerial terminal. The rejection cites to paragraph [0025]; however, the fact that "the cover section 102 and housing 104 can be formed of sheets of G90 galvanized steel having a durable finish coating, such as polyurethane powder" imparts no teaching or suggestion relevant to claims 32 and 52.

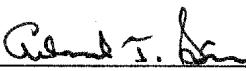
Claims 33, 35 and 51 are rejected 35 U.S.C. §103(a) as being unpatentable over Trost et al and in view of Sagawa et al and in further view of US Patent No. 6,146,576 to Blackmore. However, Blackmore '576 adds nothing to address the deficiencies of Trost et al and Sagawa et al explained above. Blackmore discloses a unique composite material impregnated with a heat curable resin. Blackmore containing no disclosure relevant to the presently claimed subject matter of claims 33, 35 and 51.

Claim 54 is rejected 35 U.S.C. §103(a) as being unpatentable over Trost et al and in view of Sagawa et al and in further view of US Patent No. 6,464,196 to Crookman et al. However, Crookman et al '196 adds nothing to address the deficiencies of Trost et al and Sagawa et al. Crookman et al '196 discloses an apparatus and method for providing a temporary spread footing for supporting a variety of vertically extending structures. Crookman et al contains not disclosure or suggestion relevant to the claimed subject matter of claim 54.

Applicant respectfully submit that pending claims 28-59, as amended, are in condition for allowance, and should be allowed. Note that the amendment provides for the cross-arm, which is traditionally a horizontal support, to be adapted for uses where the topology or other requirements involves the cross-arm being a traverse part of the utility pole to support the electrical distribution system, but not precisely horizontal. If the Examiner has any further

questions or concerns, applicant respectfully request that the Examiner telephone applicant's counsel, Arland T. Stein, Esq., at (614) 233-5104.

Respectfully submitted,



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